

Amendment
USSN 09/732,768

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A Method for checking the transfer of data cells in an asynchronous switching arrangement (1)-~~characterized in that it comprises a, said method comprising the steps of:~~

marking and a-counting of the cells received; and

a-counting of the cells, after switching when outputted from ~~the~~a switching structure (2)

of the arrangement, in order to verify that the counts correspond and to find transfer errors of data cells due to unacceptable delays, loss and unwanted copying in the switching structure,

said marking and counting of received cells and counting of cells after switching being obtainedperformed according to a periodical time frame made of interleaved checking cycles which are grouped by limited and successive series of a same determined number of cycles, each cycle (C1) including

a first phase (IC1) for marking and counting the cells as they are received, the identification mark, introduced in every cell received during this first phase, being related to the position of the cycle among the other cycles of the same series, with each first phase of a cycle following immediately the first phase of the preceding cycle, and

a second phase (OC1), starting with a determined delay (d1) after the beginning of the first phase of the same cycle, during and after this first phase for a determined

duration (t2) and for counting the cells, as soon as switched, which contain the identification mark introduced during the first phase of the same checking cycle, a determination being made at the end of the second phase of each checking cycle of the correspondence between the two counts obtained during the cycle, with a specific signaling as soon as the correspondence as otherwise determined for a cycle is not obtained.

2. (Currently Amended) A Method, according to claim 1, characterized in that wherein the result of the counting of cells specifically marked according to a determined cycle relative to one series of cycles is obtained by a count down of cells, as soon as switched, during the second phase of said cycle from thean instantaneous sum value counted up of cells as soon as received, which instantaneous sum value is obtained at any moment during of the first phase of the cycle, in order to obtain a zero value at the end of the said second phase if the correspondence between counts, as otherwise determined for this cycle is verified.

3. (Currently Amended) A Method according to claim 1, characterized in that wherein one of the two countings made during a phase is modified as many times as theythere are copies of a received cell requested at the level of the switching arrangement.

4. (Currently Amended) An Elementary asynchronous switching unit, characterized in that it comprisescomprising an asynchronous switching arrangement (1), including data cell

Amendment
USSN 09/732,768

transfer checking apparatusmeans for marking and counting the cells as soon as received and for counting the cells, as soon as switched, when outputted from the switching structure of the arrangement in order to verify that the counts correspond and to find transfer errors of data cells due to unacceptable delays and unwanted copying in the switching structure, said data cell transfer checking apparatus including a marker (8) and counters (6, 7) which perform said marking and ~~said~~ counting ~~being obtained by marking (8) and counting (6, 7) means and said~~ counting according to a periodical time frame obtained from a timing meanscontrol and made of interleaved checking cycles which are grouped by limited and successive series of a same determined number of cycles, each cycle (C1) including a first phase (IC1) for marking and counting the cells as soon as they are received, the identification mark, introduced in every cell received during this first phase, being related to the position of the cycle among the other cycles of the same series, with each first phase of a cycle following immediately the first phase of the preceding cycle, a second phase (OC1), starting with a determined delay (d1) after the beginning of the first phase of the same cycle and for a determined duration (t2) for counting the cells, as soon as switched, which contain the identification mark introduced during the first phase of the same checking cycle, a determination being made from the ~~counting meanscounters~~ at the end of the second phase of each checking cycle of the correspondence between the two counts made during the cycle with a specific signaling as soon as the correspondence ~~otherwise determined for a cycle~~ is not obtained.

5. (Currently Amended) An Asynchronous switching network, according to claim 4, which includes inter-linked switching units in one or several asynchronous switching arrangements, characterized in that each asynchronous switching arrangement, comprises a data cell transfer checking means~~checker~~ for marking and counting the cells when received and for counting the cells, as soon as switched; when outputted from the switching structure of the arrangement in order to verify that the counts correspond and to find transfer errors of data cells due to unacceptable delays and unwanted copying in the switching structure, said marking and said counting being made performed by a marking marker (8) and counting counters (6, 7) means according to a periodical time frame obtained from a timing control means and made of interleaved checking cycles which are grouped by limited and successive series of a same determined number of cycles, each cycle including a first phase for marking and counting the cells as soon as they are received, the identification mark, introduced in every cell received during this first phase, being related to the position of the cycle among the other cycles of the same series, with each first phase of a cycle following immediately the first phase of the preceding cycle, a second phase, starting with a determined delay, after the beginning of the first phase of the same cycle and during this first phase, for a determined duration and for counting the cells, as soon as switched, which contain the identification mark introduced during the first phase of the same checking cycle, a determination being made from the counting means~~counters~~ at the end of the second phase of each checking cycle of the correspondence between the two counts during the cycle with a specific signaling as soon as the correspondence otherwise determined for a cycle is not obtained.